

## AI-1704

### Specifications

AS/NZS 1553 1215 B6

### Description and Applications

**AI-1704** is a flux-cored, gas shielded wire, which deposits a "Hadfield" Manganese steel type alloy. Being an Austenitic Manganese steel type alloy, it is used for build up and reinforcing Manganese steel castings and wear components. Like all Manganese steel alloys, this alloy has excellent work hardening properties. The degree of work hardening is dependent on the amount of impact on the rebuilt component.

**Applications include:** reclaiming crusher jaws and rolls, gyratory mantles, blow bars, swing hammers, manganese steel dredge components such as buckets and tumblers, railroad sections, bucket teeth and lips, dragline Manganese steel shackles and repair of defects in Manganese steel castings.

### Typical Weldmetal Analysis

C	Mn	Si	Cr	Ni	Fe
0.70	14.00	0.60	3.50	0.40	Bal

### Mechanical Properties of Weldmetal

	As Welded
Tensile Strength	840MPa
Yield Strength (0.2%)	560MPa
Elongation	32%
Microstructure	Austenite
Hardness	210 HRb (15 HRC) 450 HRb (48 HRC) (work hardened)
Shielding Gas	CO <sub>2</sub> or Argon + 25 % CO <sub>2</sub>

### Welding Parameters

Diameter (mm)	Current type	Amps		Stick-out	
		Range	Optimum	Range	Optimum
1.2	DC+	120-200	180	<b>15-20</b>	15

### Welding Instructions

**Austenitic Manganese steels must be kept cool during welding. Do not preheat.** Use intermittent or staggered weld runs and ensure interpass temperature is kept as low as possible. Deposits can be multi-layered.

### Welding Positions

(1G, 1F) Downhand/flat position, (2F) Horizontal position, (2G) Horizontal vertical position

### Disclaimer

All figures in this datasheet should be considered indicative only. No guarantee is made as to their accuracy.

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